

### Remarks

Claims 1-17 were pending. Claims 4 and 12 have been amended. No claims have been added or cancelled. Thus claims 1-17 are subject to continued examination.

### 35 U.S.C. §112 Rejections

Claims 1-17 stand rejected under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement. Specifically, the Office Action states that there is no support for a "uniform film". Applicants respectfully disagree. On pg. 11 lines 1-2, the specification states that "the film itself is produced prior to actual contact with the target airbag cushion, or fabric, surface." Clearly, one of the inherent characteristics of this film is a uniform thickness. The specification goes on to say on pg. 11 lines 10-14 that "this film appears to act by "cementing" the contacted individual yarns in place and possibly preventing leakage through open areas between woven yarns and stitches. During inflation, then, the coating prevents leakage through the interstitial spaces between the yarns and aids in preventing yarn shifting (which may create larger spaces for possible gas escape." The specification does not say that the film impregnates the fabric as stated in the Office Action. Unlike prior art coatings which do impregnate the fabric, this invention utilizes a laminated film which serves to form a barrier at the surface of the fabric. As stated, the film cements the yarns which are in direct contact with the film and that serves to lock those yarns in place.

The specification does not state that the film fills the interstitial spaces and this in fact does not occur. Since the film does not fill interstitial spaces but merely sits on the surface of the fabric, the laminated film will have substantially uniform thickness just as the film does prior to lamination.

Claims 4 and 12 stand rejected under 35 U.S.C. §112, second paragraph, for insufficient antecedent basis for the limitation "coated fabric". Claims 4 and 12 have been amended to correct this problem.

#### Anticipation/Obviousness Rejections

Claims 1-3, 8-11, and 16-17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by or in the alternative under 35 U.S.C. § 103(a) as being obvious over Veiga et al. (US 6,239,046). Continued rejection on these grounds is respectfully traversed and reconsideration is requested.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim (MPEP § 2131). In order to establish a *prima facie* case of obviousness there must be some suggestion or motivation that would lead to the claimed invention. The suggestion or motivation may derive from the references themselves or from the knowledge generally available to those of skill in the art. In addition, all the claim limitations must be taught or suggested by the prior art (MPEP § 2142). Applicants

respectfully submit that these standards are not met by the cited art with regard to the claims as now presented.

Veiga et al. teaches a coated textile fabric for use in an airbag. As best understood, the Examiner's position is that the polyurethane coating is equivalent to the polyurethane film utilized in the instant invention. Applicants respectfully disagree. The polyurethane layer disclosed in Veiga is coated onto the upper or top surface 12 of the fabric substrate 10. This polyurethane layer is referred to as a prime coat or adhesive coat, which serves to adhesively bond the filaments of the textile substrate so they do not comb or unravel (Col. 2, lines 44-48). An elastomeric polysiloxane layer 16 is then coated onto the surface of the polyurethane layer 14 in overlying relationship thereto (Col. 3, lines 4-6). It appears that the polysiloxane layer provides the enhanced air retention capabilities.

Applicants respectfully submit that a polyurethane coating on a porous air bag especially at low coating weight is not equivalent to a laminated film. It is difficult to form a gas tight continuous coating on a porous fabric substrate at low coating weights. The coating tends to flow into the yarn interstices and voids which results in uneven distribution of coating material across the fabric surface. A non-uniform and discontinuous coating will cause air leakage through the coated fabric especially in the curtain type air bags where there is much higher pressure. Curtain type airbags also have stringent leakage requirements and applicants do not believe that an airbag coated solely with polyurethane at the low coating weights claimed could

meet these requirements or the leak-down time after inflation limitation delineated in claim 1. In contrast, the pre-cast polyurethane film of the instant invention provides a substantially uniform laminated film layer on the porous airbag fabric which provides a greatly enhanced air seal. In conclusion, Veiga provides no suggestion or motivation for the utilization of film lamination as opposed to coating methods. Consequently, applicants respectfully submit that neither the requirements of anticipation or *prima facie* obviousness have been satisfied.

Claims 1-17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by or in the alternative under 35 U.S.C. § 103(a) as being obvious over Moriwaki et al. (US 5,989,660). Continued rejection on these grounds is respectfully traversed and reconsideration is requested.

Moriwaki discloses an airbag fabric coated with a thermoplastic synthetic resin of 10  $\mu\text{m}$  or less in average thickness (Abstract). As best understood, the Examiner takes the position that this coated fabric is equivalent to the film laminated fabric of the instant invention. As discussed previously, Applicants strongly assert that this is not the case. Low weight coating of a fibrous substrate does not result in a substantially uniform laminated film layer as is required by the amended claims. Rather, the covering layer is adhered to a surface of a fibrous substrate such that interstices between the fibers are filled with resin (Col. 2, lines 14-16). Furthermore, Moriwaki teaches a coating of 10 mm or less in average thickness (Col. 5, line 2, emphasis added), strongly suggesting that non-uniformity of thickness has led to the

necessity of reporting average thicknesses. In contrast, the film of the instant invention is of a uniform thickness, resulting in substantially uniform film laminated fabric. Consequently, Applicants request that the rejections based on Moriwaki should not be maintained.

#### Obviousness Rejections

Claims 1-17 stand rejected under 35 U.S.C. § 103(a) as being obvious over Breed (US 5,863,068) in view of Moriwaki. Continued rejection on these grounds is respectfully traversed and reconsideration is requested.

Breed discloses a driver side airbag made from film 316 laminated with fabric 314 to produce a hybrid airbag 300 (Col. 18, lines 22-24 and FIG. 3A). Breed defines a "film airbag" as one wherein the film thickness is generally less than about 250 micrometers, and preferably even below about 100 micrometers, for use as a driver protection airbag. As the size of the airbag increases, the thickness must also increase in order to maintain acceptable stress within the film (Col. 5, lines 25-31, emphasis added). The instant claims are for a side curtain airbag cushion which is clearly much larger than a driver side airbag. According to the teachings of Breed, the larger side curtain airbag cushion would require a thicker film layer. The Office Action also points to columns 19 and 20 for further teachings on thickness. Applicants respectfully point out that the cited discussion on thickness refers to the dimension of the inflated airbag measured coaxial with the steering column (Col. 19, lines 58-59) rather than to the thickness of the film layer. Furthermore, the Office

Action states that Breed fails to teach the specifics of the fabric layer and for these teachings, the Examiner relies on Moriwaki. Applicants believe that Moriwaki's teachings on the fabric layer are irrelevant to the obviousness rejection since Breed fails to teach lamination of a film layer onto a fabric layer wherein said film is present on said surface of said fabric in an amount of at least 0.8 and at most 2.7 ounces per square yard of the fabric. Consequently, applicants respectfully request that the outstanding obviousness rejections be withdrawn.

Conclusion:

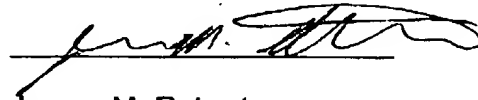
For the reasons set forth above, it is respectfully submitted that all claims now stand in condition for allowance.

Should any issues remain after consideration of this Amendment and accompanying Remarks, the Examiner is invited and encouraged to telephone the undersigned in the hope that any such issue may be promptly and satisfactorily resolved.

**Extension of Time:** A three month extension of time accompanies this submission. In the event that additional time is required to have the papers submitted herewith for the above referenced application to be considered timely, Applicant hereby petitions for any additional time required to make these papers

timely and authorization is hereby granted to withdraw any additional fees  
necessary for this additional time from our Deposit Account No. 50-1424.

Respectfully submitted,



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